

**WHAT IS CLAIMED IS:**

1. A telecommunications apparatus for use with a plug having at least first, second and third pins, the telecommunications apparatus comprising:

a plug connector for receiving the plug, the plug connector including:

at least first, second and third electrical contacts for electrically contacting the first, second and third pins, respectively, when the plug is inserted in the plug connector;

an electrical by-pass pathway that:

i) electrically connects the first and second electrical contacts when the plug is fully removed from the plug connector such that a signal can enter the plug connector through the first contact, pass through the by-pass pathway to the second contact, and exit the plug connector through the second contact; and

ii) does not electrically connect the first and second electrical contacts when the plug is fully inserted within the plug connector such that a signal can enter the plug connector through the first contact, pass through the plug to the second contact, and exit the plug connector through the second contact.

2. The telecommunications apparatus of claim 1, wherein the first, second and third electrical contacts comprise sleeve-like sockets.

3. The telecommunications apparatus of claim 1, wherein electrical by-pass pathway connects the first and second electrical contacts when the plug is only partially removed from the plug connector such that the first and second contacts are concurrently: i) electrically connected by the by-pass pathway; and ii) in electrical contact with their respective first and second pins.

4. The telecommunications apparatus of claim 1, wherein during removal of the plug from the plug connector, the electrical by-pass pathway connects the first and

second electrical contacts before the plug electrically disconnects from the first and second contacts.

5. The telecommunications connector of claim 1, wherein the third contact is a ground contact positioned between the first and second contacts.

6. The telecommunications apparatus of claim 1, further comprising a plurality of coax connectors electrically connected to the plug connector.

7. The telecommunications apparatus of claim 6, wherein a splitter/combiner is electrically connected between one of the coax connectors and the first contact of the plug connector, and wherein the second contact of the plug connector is electrically connected to another one of the coax connectors.

8. The telecommunications apparatus of claim 6, wherein a directional coupler is electrically connected between one of the coax connectors and the first contact of the plug connector, and wherein the second contact of the plug connector is electrically connected to another one of the coax connectors.

9. The telecommunications apparatus of claim 6, further comprising a circuit board for electrically connecting the plug connector to the coax connectors.

10. The telecommunications apparatus of claim 9, wherein a splitter/combiner is mounted on the circuit board.

11. The telecommunications apparatus of claim 10, wherein a directional coupler is mounted on the circuit board.

12. The telecommunications apparatus of claim 1, wherein the plug comprises an attenuator plug.

13. The telecommunications apparatus of claim 1, wherein the plug comprises an equalizer plug.

14. The telecommunications apparatus of claim 1, further comprising a module frame including a first side positioned opposite from a second side, the plug connector being mounted at the first side of the module frame.

15. The telecommunications apparatus of claim 14, further comprising a plurality of coax connectors mounted at the second side of the module frame.

16. The telecommunications apparatus of claim 15, further comprising a circuit board that electrically connects the coax connectors to the plug connector.

17. The telecommunications apparatus of claim 1, wherein at least one of the first and second contacts of the plug connector comprises a contact spring that: i) electrically contacts the electrical by-pass pathway when the plug is fully removed from the plug connector; and ii) is electrically disconnected from the electrical by-pass pathway when the plug is fully inserted in the plug connector.

18. The telecommunications apparatus of claim 17, wherein during removal of the plug from the plug connector, the contact spring contacts the electrical by-pass pathway before the plug electrically disconnects from the first and second contacts.

19. The telecommunications apparatus of claim 1, wherein the electrical by-pass pathway includes at least one spring that: i) contacts at least one of the first and second contacts when the plug is fully removed from the plug connector; and ii) disengages from the at least one of the first and second contacts when the plug is fully inserted within the plug connector.

20. The telecommunications apparatus of claim 19, wherein during removal of the plug from the plug connector, the spring closes the electrical by-pass pathway between the first and second contacts before the plug electrically disconnects from the first and second contacts.

21. The telecommunications apparatus of claim 19, further comprising a dielectric member that disengages the spring from the at least one of the first and second contact when the plug is fully inserted within the plug connector.

22. The telecommunications apparatus of claim 21, wherein the at least one of the first and second contacts comprises a socket, and wherein the dielectric member comprises a dielectric pin that extends axially within the socket.

23. The telecommunications apparatus of claim 21 wherein the at least one of the first and second contacts comprises a socket, and wherein the dielectric member comprises a camming member that extends radially within the socket.

24. The telecommunications apparatus of claim 1, wherein the by-pass pathway includes an attenuator.

25. A telecommunications apparatus for use with a plug having at least first, second and third pins, the telecommunications apparatus comprising:

a plug connector for receiving the plug, the plug connector including:

at least first, second and third electrical contacts for electrically contacting the first, second and third pins, respectively, when the plug is inserted in the plug connector;

means for electrically connecting the first and second electrical contacts when the plug is fully removed from the plug connector such that a signal can enter the plug connector through the first

contact, pass through the by-pass pathway to the second contact, and exit the plug connector through the second contact; and

means for electrically disconnecting the first and second electrical contacts when the plug is fully inserted within the plug connector such that a signal can enter the plug connector through the first contact, pass through the plug to the second contact, and exit the plug connector through the second contact.

26. The telecommunications apparatus of claim 25, wherein the first, second and third contacts comprise sleeve-like sockets.

27. The telecommunications apparatus of claim 26, wherein the first, second and third contacts are aligned in a row with the third contact positioned between the first and second contacts.

28. The telecommunications connector of claim 27, wherein the third contact comprises a ground contact.

29. The telecommunications connector of claim 25, further comprising means for electrically connecting the first and second electrical contacts before the plug electrically disconnects from the first and second contacts during removal of the plug.

30. The telecommunications connector of claim 25, wherein the by-pass pathway includes an attenuator.

31. A plug connector for a telecommunications system, the plug connector comprising:

a housing;

first, second and third sleeve-like sockets for receiving and making electrical contact with electrical pins of a plug, the sockets being mounted within the housing and aligned in a row with the third socket positioned between the first and second sockets;

a by-pass path for providing an electrical connection between the first and second sockets; and

a spring for opening and closing the electrical connection between the first and second sockets.

32. A method for removing a plug in a cable television system, the plug including an in-pin and an out-pin for allowing a signal to be passed through the plug, the system including a plug connector for receiving the plug, the plug connector including first and second contacts that contact the in and out pins of the plug for passing the signal through the plug, the method comprising:

initiating removal of the plug;

forming a signal by-pass path between the first and second contacts while the first and second contacts remain in contact with the in and out pins of the plug thereby causing the signal to by-pass the plug; and

finalizing removal of the plug after the signal by-pass has been formed.

33. The method of claim 32, wherein the plug comprises an attenuator plug.

34. The method of claim 32, wherein the plug comprises an equalizer plug.